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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,085	08/17/2001	James Joseph Anthony McCormack	NL 000460	5456

24737 7590 06/04/2003

PHILIPS ELECTRONICS NORTH AMERICAN CORP
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EXAMINER

NGUYEN, JIMMY H

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/932,085

Applicant(s)

MCCORMACK, JAMES JOSEPH
ANTHONY

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. This Office Action is made in response to applicant's papers filed on 08/17/2001. Claims 1-5 are currently pending in the application. An action follows below:

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

In the instant case, there are no section headings. Appropriate correction is required.

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3. The disclosure is objected to because of the following informalities: the specification refers to specific claims that are not permissible as the claims may be amended in the future. For example, in page 2, lines 25 and 27 and page 3, lines 23, 28 and 31, specific claims are referred. Appropriate correction is required.

4. The abstract of the disclosure is objected to because last line, "(Fig. 3)" should be deleted due to a typo. Correction is required. See MPEP § 608.01(b).

Drawings

5. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the feature, "a voltage (Vc) having a periodically changing polarity across a capacitive load (CL)" recited in claim 1 and 5, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

7. Claim 5 is objected to because of the following informalities: line 2, --and-- should be inserted immediately before "an", so as to improve the form to conform with U.S. claim drafting practice. Appropriate correction is required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weber et al. (USPN: 4,866,349), hereinafter Weber, and further in view of Lo (USPN: 6,483,490 B1).

As per claims 1 and 5, Weber discloses a matrix display apparatus (fig. 2) comprising a matrix of pixels (fig. 2) associated with intersecting electrodes (sustain electrodes and address electrodes, fig. 2), and an energy recovery matrix display driver (fig. 5) for generating a voltage (Vp) having a periodically changing polarity across a capacitive load (Cp) (fig. 6), the driver comprising an inductor (L) being coupled to the capacitive load (Cp), a first switch (S1), a second switch (S3), a power supply voltage (Vcc) and an inherent control circuit for controlling the switches to periodically open and close (fig. 6). Accordingly, the difference between the invention defined in these claims and the Weber reference is the addition of a switch circuit connected in parallel with the inductor. However, the Lo reference discloses a related display apparatus comprising an energy recovery matrix display driver circuit (an energy recovery circuit 704, fig. 7, col. 5, lines 37-38) including a switch circuit (a bi-directional switch 708, fig. 7, col. 5, line 41) connected in parallel with the inductor (L2) for circulating a current (I12) through the inductor (L2) in a loop formed by switch circuit (708) and the inductor (L2) (see figs. 7 and 8, col. 6, line 25 through col. 7, line 39). It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to provide Lo's the switch circuit in the Weber

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system because this would improve the luminous efficiency of the display device, especially for a large display device, as taught by Lo (col. 2, lines 14-20).

Regarding to claims 2 and 3, Lo further teaches the switch circuit (708) comprising a series arrangement of a diode (D11) and a controlled switch (M11), and a series arrangement of a diode (D12) and a controlled switch (M12) (figs. 7 and 8).

Regarding to claim 4, Lo further teaches that the inherent control circuit, for controlling all the switches, is adapted to close the second switch (M5) after the instant at which the loop is closed (figs. 7 and 8, col. 6, line 25 through col. 7, line 39).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ohba et al. (USPN: 5,670,974, see fig. 5) and Moon (USPN: 6,111,556, see fig. 6), both discloses related display device comprising an energy recovery matrix display driver circuit.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

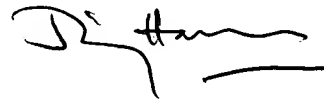
or faxed to:

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(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is (703) 306-0377.



JHN
May 29, 2003

Jimmy H. Nguyen
Examiner
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